

PIEZODYNAMIC VIBRATION DAMPING SYSTEM

ABSTRACT OF THE DISCLOSURE

A vibration damping device and method for momentum control devices is provided. The vibration damping device includes a piezodynamic damping spacer and a tuning system. The piezodynamic damping spacer is coupled to a bearing in the momentum control device. The piezodynamic damping spacer is configured such that vibrations in the momentum control device are absorbed by piezodynamic damping spacer. The piezodynamic damping spacer converts these vibrations to electrical energy, where they can be dissipated by the tuning system. The tuning system provides the ability to tune the vibration damping device to most effectively absorb vibrations in specific frequency ranges. Thus, the vibration damping device is able to effectively reduce vibrations in the momentum control device.